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ABSTRACT

Planning, programing, budgeting is an approach to rationalizing budgeting and strengthening analysis as a policy change and planning tool. Organizational development applies behavioral science research to organization to enhance the commitment and involvement of personnel for smoother and more effective system function. It is argued that implementation of PPB can be facilitated by proper attention to the management philosophies of OD; and that by the concerted, coordinated use of these approaches, planning and system growth will undergo considerable improvement. The special philosophies of OD are discussed in planning contexts, and the federal government's implementation of PPB is examined for problems it encountered. A paradigm is subsequently developed that specifies more explicitly the proposed PPB-OD interaction. The special contribution that OD can make to program planning and budgeting processes is developed in detail. (Author)

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Educational Planning with Organizational Development (OD): A People Involving Approach to Systemic Planning

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Introduction

In this paper we will present an approach to planning and system management which makes use of a coordinated interaction of Planning-Programming-Budgeting and Organizational Development technologies. PPB provides a powerful rationale and framework for improving planning and decision making processes, while OD exhibits special capabilities for resolving organizational conflicts and for involving and gaining the commitment of system personnel. We believe that by joining these special types of knowledge – that by combining the systems analyst with the behavioral scientist – the two potentials of these planning and management techniques can be enhanced over either alone. In demonstrating the gains to result from this synthesis, we will draw from our own respective research experiences as well as from those documented in the available literature.

PPB is an application of systems theory to modern industrial and governmental organizations. PPB specifically seeks to make the system operations, communications, and planning functions more rational and adaptive over time. Goals for the system are collected and developed into a hierarchical scheme. To the extent possible and within the evolving character of the PPB approach, system activities are organized into an ensemble of discrete "programs", whose structure and administrative function parallel the structure of the system goals. An analytic capability is incorporated into the program structure and analysis becomes a routinized function for the evaluation of program progress. Alternative means for achieving program (or system) goals are isolated, performance is measured through the use of performance indicators, criteria for effectiveness (an expression of the program goals) are developed, and an evaluation of program effectiveness is made. Decisions are then founded on the results of this analysis supplemented by cost information. Through this process, responses are developed to alter the system structure and function as the goals or needs of the system evolve. *It is this analytic capability which most distinguished PPB from prior efforts at budgeting reform. Budgeting through political bargaining is reduced as a more rational, system-wide consideration of system needs is undertaken; through analysis the current state of system priorities and needs are highlighted, and the budget is produced through the programming of resource requirements. Planning is stressed in terms of the long – as well as the short – run: the growth of the system is examined and forecasted in terms of a Multi-Year Financial Plan.*

OD can be defined as a planned and sustained effort to apply behavioral science to the people-problems in organizations for the purpose of improving procedures and work-relationships throughout the system. Any approach which helps the system sustain procedural change in a desirable direction is appropriate. The methods of OD include training sessions in communications skills, two-way goal setting, conflict management, adjusting behavioral norms, altering procedures for decision-making, and generally to diagnose and implement cures to organizational conflicts. The client system is actively involved in the research process so that data are validated as they are generated, so that useful intraorganizational experience can be utilized in planning, and so that the system is able to recognize and freely choose action alternatives to which it will be most committed. The system's organizational improvement objectives are carefully delineated, and new roles, procedures, policies, norms, and structures become formalized and institutionalized with budgetary support.

This last—the structural aspect of OD-resembles that of PPB, but it tends to be more limited in its scope: the time invested in structuring system objectives and functions is less, the number of activities organized is fewer, and, unlike PPB, an explicit analytical-evaluative-planning interaction is not necessarily formally incorporated in to the final structure. OD accepts the need to structure system activities, but these structures often amount to little more than aids in the grouping and classification of relevant data types. In general, OD technologies have been applied to

"limited-objective" types of situations in which specific intraorganizational conflicts must be clarified and resolved. The need for developing planning strategies and for the use of extensive structural analysis by OD specialists has not been widespread.

However, in managing the growth and development of large systems, we must recognize the central importance of the system structure to the very ability of an organization to function and of planning to the guidance of the system evolution. Conflicting and overlapping authorities, poorly defined objectives, irrational budgeting and information procedures, and other structural illnesses can seriously impair the effectiveness of system operations while simultaneously and needlessly increasing system costs. Planning which is dominated by the political aspects of "budgeting by bargain" usually results in the perpetuation of present structures and modes of operation well into the future with little or no attention to the development of more effective alternative means for achieving system goals. Changes, and hence planning, become crisis responses; stop-gap measures may temporarily control problem symptoms, but systemic and continuing evaluation and planning must be utilized for the solution of basic problems and for a more rapid and sure convergence of the performance of the system to its stated goals.[1]

PPB is specifically required for the special competence it offers in the areas of structural analysis and design and for its ability to develop planning capabilities for the large, complex organizations today encountered in government and education. Yet, while PPB can help systems achieve functional and planning rationality, humans do constitute the work force responsible for exercising efficiency and meeting organizational objectives, and it is not possible to separate them from the issues of accountability and effective planning. The role of people interactions is much more critical in structures to which we would apply PPB than in the smaller, simpler systems; but these interactions are often lost in PPB's heavy emphasis on the structural aspects of organizational processes, and otherwise excellent innovations may be thwarted as a result of this neglect.

Both PPB and OD purport to help organizations to achieve their goals, but their approaches to resolving organizational difficulty are different. Nevertheless, it is clear that the two stresses are complementary, and that, in fact, the effective intervention in large organizations by either approach relies heavily on the interaction it is able to sustain with the other approach throughout that intervention. Thus, to PPB we assign the task of elucidating the nature of system interactions* and of developing more effective system structures** and to OD we assign the amelioration of system people-problems, both those innate to the system and those encountered during the development and implementation of the new PPB system structure. We accept the basic structures and *modus operandi* of PPB, and we will try to justify combining with this the management-conscious rationale of Organizational Development.

The next portion of this paper will be devoted to introducing some of the philosophies and motivations for the Organizational Development approach and to suggesting its modes of operation in organizational settings and possible interactions with PPB and other systematic planning efforts. In the final section we shall develop an explicit paradigm for the nature of an OD-PPB coordinated organizational intervention.

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* e.g., what authority lines exist (who "reports" to whom), what the information flows are, where decisions are made, who is responsible for planning, how planning occurs, how budgeting is achieved.

** e.g., formalizing and "beefing up" the analysis and planning functions, developing a new organization of departments and functional subunits, formalizing the needed communications and information flows, instituting a budgeting system based on a careful consideration of system priorities and the effectiveness and cost of program alternatives.

Organizational Development: Philosophy and Applications

There is one overriding principle which guides much of the philosophy of Organizational Development and its mode of response to organizational problems. That is that individuals seek to maintain themselves as individuals regardless of their environment. Their personal goals and needs (quite naturally) are the ones which they will most wish to achieve and satisfy; if there is a choice or conflict between the desires of the individual and the objectives of the organization, it is almost certain that the organization will suffer. The National Training Laboratories have accordingly developed an operational definition of what OD tries to do;

> Using knowledge and techniques from the behavioral science, organization development attempts to integrate individual needs for growth and development with organizational goals and objectives in order to make a more effective organization.[2]

The importance of sharing system goals and control by personnel can hardly be overstressed. Without this sharing, personnel will not be committed to the efficacy of system function, and it becomes correspondingly difficult to motivate action in accordance with system needs. Certainly, performance would only be "to the letter of the law" at best; creative risk-taking or suggestions for system improvement are not to be expected from bored or threatened subordinates. As many students of organizational processes are keenly aware,[3] poor attention to the psychological needs for involvement and growth of personnel has often resulted in considerable subversion of system objectives by informal peer groups at different hierarchical levels of the organization.

In OD no attempt is made to "trick" the people into an illusory conception of the state or nature of the system's or even their own goals; a genuine effort is undertaken to alter the structure and nature of intraorganizational communications, to distribute influence more broadly and to decentralize decision-making, and in general to improve the entire organizational climate. Through the integration of individual needs with those of the organization, we gain the involvement of personnel and their commitment to the growth of the system. By this we may expect lower job turnover rates, increased intraorganizational cooperation, and on the whole better and more effective system function.

For purposes of discussion, the principle that "individuals seek to maintain themselves as individuals" may be translated into two sub-principles. The first is that (in education in particular) people are not really committed to decisions they have no part in making. The second sub-principle is that people do not automatically accept or adopt the goals of others; unless they take part in developing those goals, they will not "own" them and conflicts are likely to emerge. A second principle is that subordinates attempt to liberate themselves as much as possible from organizational controls. They strive to maintain and even assert their autonomy by hoarding information, supplying inaccurate data, and generally providing only half-hearted cooperation.

Decision Commitment and Goal-sharing

In a system context, decisions are action determinants which are designed to further in some way the attainment of system goals. Better decisions are those which, in the final analysis, result in greater objective attainment. *If we could define the goals precisely and explicity,* it is probable that, of a set of alternative methods for achieving those goals, there would be only one best choice.

However, different people possessing identical information on the potential of the alternatives will very often differ in their final selections. Each different decision (or even an identical decision) represents a different conception of program goals*. But, who, for example, in a school system is the proper source of program objectives: is it the parents, the school committee, the administrative superintendents, the principals, the teachers, or the students? Or is it some combination of these groups?

In most organizational setting, we find[4] that system development (and hence objectives) is controlled primarily by the upper echelons of the system administrative hierarchy, with little or no interaction with either the demands of the environment or the other personnel within the system. Personnel related to a program generally have fairly clear conceptions of the goals of the program[5] – either by deducing them from the structure of the program or by assigning goals in terms of what they think the program should *instead* be doing (which results in alteration of program implementation) – but these conceptions may or may not come close to the objectives that those responsible for selecting the program had in mind. In general, the result is that no one really knows what is supposed to be happening in the system, much less what is actually happening.

Smith et al, in their post-mortem on a study of the USDA farm market news program, point out:

> Our very effective technique for enabling personnel to maintain varied intentions without feeling personal disloyalty or conflict is to keep the program and its aims general, vague, and ambiguous, so that the individuals are free to apply a variety of consistent interpretations.6

With this, outside evaluation of effectiveness is impossible and attempts to improve system performance are foredoomed. PPB techniques can help to structure system objectives and system function more clearly and, through PPB communications networks, the goals for new programs will be defined and clarified for all personnel involved in the program function and implementation.

Referring back now to the question of who is the proper source of program objectives in a school system, the real answer should be: all of the groups listed. OD explicitly stresses the importance of a two-way ongoing goal setting process. Most PPB schemes currently being imployed in American education rely heavily on hierarchial controls in order to work effectively; too little allowance is made for active two-way goal-setting. In the objective setting stage of the PPB program, those persons in the organization who participate are often required to set objectives within the goal parameters already established by those in the upper echelons of the hierarchy. Strong emphasis is placed on such statements as the following:

> . . . objectives should be constructed in such a way that they relate upward to one or more general expressions of public intent.[7]

This rather limited form of goal setting with its one-way thrust (downward) would tend to prevent subordinates from really "owning" the objectives they set.

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* The criterion is an experssion of system goals in which the different needs of the system are weighed according to their importance. A criterion for a third grade reading program would emphasize vocabulary, spelling, phonics, reading mechanics, and different comprehension measures according to their relative significance for pupils at the third grade level. Through the criterion the performance of a program is evaluated in terms of its effectiveness or goal attainment. In the example given in text, more "if's" are involved than stated: if we could faithfully translate the goals into a criterion for effectiveness and if we could measure accurately the performance of the various aspects of program function, *then* a different decision would necessarily represent a different conception of system goals. It is doubtful that these "if's" will ever be fully realized, but we can certainly expect and work for improvement in these areas of objective formulation, criteria development, and performance measurement.

Investigations of bureaucratic organizations repeatedly reveal (Smith et al) that "the intentions of personnel often diverge from those formally stated for the organization."[8] In Crozier's[9] study of public bureaus in France, he found that subordinates developed their own conceptions of their responsibilities to conform with what they were willing to do; within these roles they were able to achieve much freedom and autonomy at the expense of both system function and accountability. To control the proliferation of objectives in the organization structure is very difficult. Most systems operate under conditions of change wherein it is impossible to completely legislate human behavior. It is necessary to define roles and responsibilities somewhat broadly and hope that subordinates will act responsibly within such a context. When system goals are not "owned" by the people responsible for maintaining program function, the system has trouble.

This is an important lesson for PPB practitioners and planners generally. The development of a rational structure of system goals and activities hardly is a guarantee that they will be accepted. And this touches on the second principle in which personnel tend to resist organizational controls. In the words of Likert and Lippett:

> It is common experience that orders, by themselves, are seldom sufficient to produce effective change in an organization and its functioning. Other procedures, including those which make some use of participation, are usually required.[10]

Vested interests naturally will resist innovations, and especially innovations with the profound consequences of PPBS. In education the economic rationality of the program threatens members of the power structure who are used to budgeting through political bargaining, and, according to Hartley, [11] the centralization that PPBS (ostensibly) favors may antagonize all personnel, especially those at lower levels. At this point it becomes the task of the people-oriented portion of the PPB-OD union to include system personnel, at all levels, to *motivate and justify not only the use of an analysis-oriented system structure such as PPB, but to motivate and justify the very objectives and activities of the system undergoing structuring. This is an important point: here we attempt to involve* the personnel in the system, to enchance their feelings of importance and participation, to encourage their contributions, and to insure their commitment, while keeping the system goals foremost. We must go to these people with our "case" for the system; motivated subjects will exist when the research or work is perceived by them as both meaningful and need-fulfilling. [12]

"Balanced" implementations of PPB[13] will in general utilize such indoctrination sessions, but the PPB process can still be a "coercive" one in which roles are imposed. Organizational Development here recognizes the need for personnel to contribute and be creative within their roles. First, the system "goals," to be truly "goals of the system," must have the support of the entire system. The goals should not be established exclusively by the high level administrators, but by all personnel. This massive "two-way" goal setting is accomplished through the use of techniques developed by OD theorists.* We borrow from the experience of Likert and Lippett in industrial settings:

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* Mass goal-setting technology currently is being employed in several school systems around the country. In Louisville, Kentucky, pupils are setting behavioral-learning objectives with teachers who then use such information to form school-wide teaching objectives. Westport, Connecticut is another community which has tried a similar "management-by-objectives" approach to replace more traditional forms of teacher supervision. In Westport, teachers set goals with department heads who, in turn, set personal and departmental goals with the principal and the Central Office Curriculum Director. The principal and director then set school and departmental goals with appropriate assistant and associate superintendents, and the top-level staff similarly work with the superintendent of schools who then sets system-wide goals with the Board of Education. Reactions to goals set at higher levels of the system hierarchy are solicited from lower level personnel and adjustments are made as deemed appropriate. The Dartmouth High School, in Dartmouth, Massachusetts, has used a "charette" methodology to involve students, teachers and parents in setting objectives for the high school. Though less formal in its approach, the Boston City Transportation Review is itself currently involved in such goal-setting efforts with regard to transportation issues in the Boston metropolitan area.

> Obtaining participation of the relevant personnel in the planning stages of a study yields two dividends. It enriches and improves the material used in planning the study, and it also achieves the desired involvement. . . The knowledge of company operations possessed by company officials and employees makes them experts whose help is needed by the research staff in planning a study and interpreting the data.[14]

Antonomy and System Control

In this section we will consider in greater detail the second principle which we mentioned at the outset of this discussion: how to cope with the resistance of subordinates to organizational controls. This ability to resist organizational control is properly called autonomy, and, as Jay[15] points out, autonomy is one of the real pleasures of power. Shepard[16] feels that the underworld of informal organizational life (i.e., that which is important to worker peer groups but not officially approved) is spent trying to gain freedoms from the impositions of superiors. Anthomy Downs sums up this psychological principle with what he calls the "law of counter-controls":

> The greater the effort made by a sovereign or top-level official to control the behavior of subordinate officials, the greater the efforts made by those subordinates to evade or counteract such control.[17]

Autonomy is one facet of organizational life which is very common to school systems. For example, studies in both Boston and Chicago, revealed very high amounts of organizational autonomy among department directors, principals, and even teachers.[18] It is because of these pockets of autonomy, it is becsuse these systems are "less controlled by the top," that Quade[19] speculated that systems analyses would come more slowly to non-military organizations. But even in the Department of Defense the regular military men found it difficult to adapt to the new systems approach[20] which indicates that even where it is possible to "exact compliance" from subordinates, more attention to personnel problems is necessary.

The means by which people preserve their autonomy is varied, but a common method, which has serious implications for the effectiveness of system function is for personnel to hoard scarce information. In Crozier's[21] study, this guarding of information was clearly visible. By controlling the flow of information, they can free themselves from the possibility of negative evaluations which such data might permit. (This is a point to be picked up later.) In situations in which data do not even reflect on the performance of personnel, the hoarding of data is still an expression of autonomy. If personnel can create conditions of uncertainty by their possession of information, they become quite indispensible. For example, the Boston School Department instituted a data-processing center in 1963. On tape were available some accounting information, some demographic data, and a few other student data items. All other kinds of data needed for planning were conspicuously absent. Some interviewing revealed that department directors and principals with these additional data available to them refused to share the information so that it could be stored and used for planning purposes. After nine years, the data processing center remains a small operation off in the basement of one of the technical high schools.[22]

Wildavsky[23] criticizes PPB from the standpoint that the structure's demand for analysis from each departmental program inundates the administrator with "piles of meaningless data". Clearly, if we solicit data from people who are unwilling to surrender it, the data supplied will be of

questionable value.* Information transfer becomes a motivational problem, and it becomes important to find ways to get personnel to yield their information and generally to gain their cooperation. The OD formula for achieving this is to offer personnel influence in exchange for their autonomy. This returns to our emphasis on the need for two-way communications, on the need for personnel to share the system's objectives, and on the need to involve – actively – all personnel affected by program policies. Decisions are made by people possessing the information, and with OD, decision-making in PPB becomes a decentralized process. Instead of being proccupied with identifying the decision-makers according to whom has "legitimate" authority, emphasis is placed on the best possible decision. Decision-making requires adequate information, and all too often those in authority simply lack the quantity and quality of information required.

In criticisms specifically directed at PPB applications, Schick[24] warns that provincial, narrow perspectives characterize lower lever officials and that they lack the insight and competence to do analysis; to the extent possible, the decision process should bypass lower-level personnel. Schick's view of the capabilities of system personnel is overly pessimistic.. Likert and Lippett[25], in their exhortation to involve system personnel in organizational change, point to "the important ideas that the many kinds of people involved can contribute". Personnel at different levels of the organization possess experience and knowledge of system operations that make them indispensible in the planning of system changes related to their spheres of work. People on the whole are far more intelligent than they are given credit. In many existing bureaucratic organizations, superiors may view subordinates as lazy, irresponsible, materialistic, dependent, and requiring close supervision. When such assumptions are made, in accordance with the pygmallion effect, the subordinates tend to conform to expectations. But, when adults are treated as intelligent, responsible, ambitious, creative, growing, and goal-achieving, they will usually respond to these higher expectations.

In Croft's[26] presentation of an OD application with the York County Board of Education in Ontario, Canada, administrators began to involve, in the planning of the budget, subordinates who had not been previously consulted. An example is produced in which a caretaker actually participated in the planning in his own area of accountability rather than submitting requisitions to his superiors. The budget for maintenance was considerably improved with substantial savings as a result of the "quantity and quality of data which the caretaker had". In general,

> . . .superiors found that their subordinates had all kinds of highly relevant data at their fingertips which the superiors had never considered before. Consequently, better decisions were made and money was saved.[27]

In a study of the Boston School System by one of the authors,[28] it was found, for example, that teachers may be better disposed to innovation in general, and to PPB in particular, than almost any other members of the school system. Teachers organized and assessed classroom activities in terms of objectives, and they had specific criticisms of and suggestions for School System improvement which, to the investigators, seemed highly intelligent and well-considered. While formal exchanges of information with higher levels of the school system structure were not extensive, it appeared that interlevel communications could be easily increased if proper coordination were supplied.

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* Here Wildavsky means to stress as well that PPB implementations have not paid sufficient attention to the need for careful selection of data items specifically pertinent to the requirements of evaluation and planning. Indeed, the success of the design of the performance evaluation and analysis functions and of the staffing of the analytic branch will in large measure determine the success of the PPB implementation. This we freely admit, but it is possible to do much better when the role of analysis in the system is properly understood, and this was generally not true of the federal PPB implementation with which Wildavsky is at issue.

Organizational controls originating from superior and conveyed down ward to subordinates should be accompanied by meaningful upward forms of influence and communication. When control is one-way, there tends to be token compliance to the "letter of the law,", emphasis on the short over the long-run, hiding of infractions of rules, and reduction in subordinate creativity from suppressing discretion within which creative potential can be unleashed.[29] Accordingly, OD specifically seeks to open, on a permanent basis, avenues of communication to make goal setting and interlevel interactions ongoing processes. These avenues become part of a feedback system by which feelings are expressed, openness is encouraged, information is transferred, and the system is changed. In generai, communications are improved and increases, allowing for better and fuller use of all types of data available while enhancing the sense of participation by personnel.

An example of a serious planning failure due to poor communications arises in the arena of international diplomacy in the Cuban missile crisis of 1962. The Soviet effort to plant missiles on Cuban soil was shrouded by such incredible secrecy that necessary and important communications were omitted among the groups responsible for different aspects of the installation of missiles. The shipment and transport of materials was executed by a Soviet group very experienced in clandestine arms shipment, and this part of the effort was successful. Yet, the construction sites were not disguised or camouflaged in any way. In addition, radar installations, necessary to monitor U-2 surveillance, were not completed before surface-to-air missile construction was underway, and the construction of SAM sites, necessary for protection against US surveillance or attacks, was not completed before site construction for the much more expensive and important medium-range ballistic missiles. Because of these and other oversights by the Soviets, the United States was not only able to detect the presence of of the projects, but it was able to take actions which the Soviets were as yet unprepared to counter. In Allison's words:

> This "failure thus seems a classic instance of insensitivity to the requirements of administrative feasibility. The attempt to employ a number of separate organizations among which communications was severely resrricted to perform a new task which required a high degree of coordination produced outputs which failed to dovetail at all points.[30]

While planning exercises in social settings may not involve the dramatic consequences of this example, it is evident that systems with inadequate exchanges of information will not be able to function properly. One of the most important goals of both Planning-Programming-Budgeting and Organizational Development is the improvement and facilitation of intrasystem communications. In PPB, communication is geared primarily for the dissemimation and collection of information necessary for program function and system planning; the current communication flows are analyzed, the necessary flows are determined, and new flows are formalized. In OD, communication, if less formal, is part of a planning emphasis, but just as important is the increased sense of system involvement which open and fluid interlevel communications generates among personnel throughout the organization. This is accomplished first through the creation of an atmosphere in which communications from lower-level personnel are solicited and encouraged and second through training in specific communications skills.[31]

An important point related to the control of information is how it is used. Information is the basis for analysis which, in turn, provides the basis for evaluation and decision-making, but it is important that these data not be used for the control of personnel. As likert and Lippett have pointed out, it must be emphasized and re-emphasized that "the objective of the research is to discover the relative effectiveness of different methods and principles and that the study is in no way an attempt to perform a policing function".[32]

> An orientation focused on discovering better principles and methods of organization and leadership reassures persons who may feel threatened by the research. If they feel that the research is to learn how to help them to do their job more successfully, they usually are eager to cooperate.[33]

If analysis is not explicitly directed towards "principles and methods," analytical staff members will be seen as "management spies" and they will not be trusted. Caro states:

> Staff practitioners interested in avoiding criticism of their work are likely to attempt to conceal real or imagined shortcomings. Such steps, of course, would add greatly to the evaluator's difficulties in obtaining valid data.[34]

Analysis is not often properly understood by administration and it can be sidetracked from its primary purposes of evaluation of alternatives and planning of future courses of action. This again points to the importance of training of not only lower-level personnel, but of personnel in the upper echelons of organizations. For example, Galnoor and Gross, in their work with budgeting systems in under-developed countries, comment that the primary impact of budgeting reforms has been the creation af analytical capabilities for evaluation of the past rather than planning of the future.

> Thus, traditional budgeting was used for developing the auditing and comptroller roles of certain agencies; and performance budgeting for introducing work measurement standards.[35]

And analysis has effectively become – at least in part – a policing function. Even in the California State Board of Education (which has attempted to use a PPB system), the program structure and analytic capabilities are more budget – than policy-oriented. But efforts are being made to construct a more goal-oriented structure and to use more policy-oriented forms of analysis.[36]

Certainly, it is entirely possible that a member of the organization will sabotage some aspect of system funciton through his own negligence or even through a lack of comprehension of his role. Through analysis the poor function of this part of the system may become evident and attract further investigation, but OD stresses that no action should be taken in the sphere of work of personnel without the involvement of these personnel. Here this means that the person "responsible" for the poor performance (if, indeed, poor performance cannot be attributed to the content of the program) is due a hearing on the matter to defend himself on the issue. The benefits to be gained by this procedure are obvious:

1. if the system is at fault, corrective action may be needed and the person questioned will likely be able to assist in redesigning the faulty aspects of the program (in effect we are making use of uncollected feedback data on the program);
2. if the person misunderstood his role, this again implicates the system for failure to supply needed communications, and new training will probably be needed;
3. if the person has been negligent, he may be encouraged by the fairness of the evaluation process to modify his behavior sufficiently be be retained as a valuable member of the system;

4. if the person is unsatisfactory in his role, another role within the system might be found in which the person would be happy and competent to function;

5. if the person is truly unsatisfactory in his role and cannot be dependend upon to act consistent with the needs of the system, it is found that, even with generous treatment by an investigating committee, this person will usually voluntarily eliminate himself from the system.

By formal incorporation of this procedure into the people-portion of any evaluation cycle, personnel will feel more respected and less threatened by system evaluations with the result that personnel will be more committed to the system and more willing to comply with the data requirements of the analytic branch.

Violation of important principles of management is seen as a ready source of difficulty in the function of system programs. We will now dwell on the federal expereince with PPB in illustrating the effect of the neglect of certain of these principles. Ironically, the first serious and widespread implementation of PPB by the federal government was itself conducted with such naivety for the people-problems to be encountered, that it achieved only limited impact on system planning. Communication within the system was so poor that tremendous confusion developed as to whether PPB was an agency management tool or if it existed primarily to fulfill the requirements of the Bureau of the Budget. In Schick's[37] terms, the PPB system needed to be oriented either to executive perspectives and objectives or to departmental purposes. "If it tries to serve both masters, a system will break down under conflicts of interest and design."[38] In part, this confusion arose from the ambiguity in President Johnson's original statement on PPB. It is not clear whether Johnson was referring only to his Office when he told his Cabinet that PPB would "improve *our* ability to control programs and our budgets rather than having them control us,"[39] or was including the individual Cabinet members as well. Regardless, it is unforgivable that such a massive project should begin without this point, in fact, having reached full clarification.

While no agency reported tremendous success with the use of PPB, those agencies which perceived PPB to be a Bureau requirement generally made less progress toward the integration of analysis with decision-making than agencies which perceived PPB as an instrument of agency management. The success of the implementation was very much a function of the support it received from agency heads, and this indicated the important correlation between "ownership" of a process and how well personnel function under it. Still, throughout the agencies, there were general feelings of mild indifference toward PPB; most agency personnel felt that the BOB was making little or no use of PPB submissions.[40] The formal procedures relating to PPB were unstable in a large number of agencies, as well. One frequent complaint was voiced by a top-level analytic staff supervisor:

> The Bureau ought to make up its mind what it wants. Not only does the Bureau's approach keep changing, but Bureau personnel do not seem to agree with each other about what the Bureau wants from the agencies' PPB submissions.[41]

In the federal implementation, systematic analysis was not effectively incorporated into the PPB structure. Program memoranda were generally uninspired and below the standard required for effective decision-making. We suggest here that two reasons account for this, which reflect the lack of open two-way interlevel communications and the lack of commitment by personnel and involvement of personnel in system control:

1. the unwillingness of personnel to evaluate negatively the progress of programs of which they were members, and

2. the realization of personnel that the people reading and supposedly using the memoranda did not expect to receive fully valid information anyway (because of 1).

The feeling of people working within PPB that the system was not being used to full advantage would also depress the quality of materials submitted. As one consequence of the lack of purpose and motivation felt by personnel, the federal PPB experience, too, resulted in a distraction of analytic capabilities to budgeting concerns; policy analyses which did occur were performed in much the same way as before the implementation of PPB.[42]

Critics of PPB founded most of their objections on the federal experience. Certainly PPB and other budgeting-decision systems have had shortcomings, but the federal implementation suffered from insufficient planning of the approach and methods of the technical function of PPB as well as the omission of proper people-oriented procedures during the implementation and operation phases of the system. PPB, in one respect, is very susceptible to people-oriented problems simply because of the large number and diverse nature of roles it attempts to create, structure, and delineate. PPB practitioners and administrative personnel can be overly preoccupied with the structural aspects of the "developing" system (as these aspects do command considerable expenditures of time and effort) *and hence can overlook what may be even more important analytical and people problems.* In this vein, Schick,[43] Wildavsky,[41] and Hartley[45] focus on the budgeting portion of the PPB cycle: they claim that budgeting is by its nature a bargaining process, the political aspects of which PPB virtually ignores. But PPB specifically seeks to introduce a more rational, policy-oriented basis for budgeting at the expense of the process of budgeting by "button-hole". Results have been obtained which support PPB's ability to do this. In the tremendously political setting of New York City, implementation of PPB resulted in better organization, improved services, and considerable savings in the budget. These positive gains were made in spite of a reported shortage of analytic personnel.[46] As we indicated above, vested interests will resist change, but if the use of a system such as PPB is sufficiently justified and if techniques such as those of Organizational Development are used to involve personnel, we may hope to gain enough support for the system to operate more smoothly and efficiently.

The case for PPB can be argued strongly.[47] While PPB can, in Schick's[48] terms, underline and exacerbate organizational conflicts, with the help of OD the aggravation can be minimized and the conflict resolved. PPB is useful because it can organize a great many diverse functions and goals of an organization in a rational way, but it also tends to organize system conflicts so that they can be more clearly recognized and more rapidly dealt with. *Through its analytic capability, PPB permits in a system a self-consciousness, an awareness of purpose and function, which was not possible before.* But PPB consultants often do not have the background or expertise to understand and coordinate the numerous human reactions which are bound to arise in organizations confronted with innovation and which can cripple attempts for system improvement. *We argue here that OD and PPB must be united for the effective planning of system change and development; OD is what will make PPB work, and only when this is understood will innovations in planning truly achieve fruition.*

A Paradigm for PPB-OD Interventions

In this, the last portion of the paper, we present a paradigm for the operation of a Planning-Programming-Budgeting/Organizational Development strategy. The focus of the discussion will be on applications in educational settings. Before describing the proposed interaction, we will clarify our conception of the modes of operation of the two methodologies.

In program budgeting the following system characteristics and processes merit definition:

1. System goals: these are the purposes of organization function or the needs to be filled;

2. System or program structure: this is the most characteristic aspect of PPB, the organization of system functions into "programs" which are structured and proliferated in terms of a parallel structure and proliferation of system goals;

3. Programming: this is the translation of the needs of program function into specific resource requirements on an immediate and long-range basis;

4. Budget: the budget is produced as a result of programming;

5. Measurement: through measurement, data are supplied by which evaluation of program progress is possible; measurement can also be involved in programming, but this type of measurement is generally performed by budgeting rather than analytic personnel;

6. Analysis: analysis is comprised of several functions which provide a continuous awareness of the state of the environment and of system function, and which generate suggestions for alternative means to meeting system needs:

   - through analysis, alternative policies and methods for achieving system goals are isolated,
   - through analysis, data (from measurement) are examined to develop performance evaluations for current and alternative programs,
   - through analysis, interactions are sustained with decision makers for the development of effectiveness criteria,
   - through analysis, criteria are applied to compare system or program performance with system goals to arrive at effectiveness evaluations which, with cost information, become inputs to the planning function;

7. Planning: this is the actual decision process in which the growth of the organization is plotted; in planning, the evolving character of system goals is identified, and, based on effectiveness and cost data, selection is achieved from the competing alternative programs developed by analysis.

Typically, three distinct functional units of organization exist in a PPB system:

1. the central functional unit

   in a school system this is the administrators, the principals, the teachers, the specialists and aides – in general those who carry out system operations

and two auxiliary units,

2. The budgeting unit

   the people who perform programming operations and develop the budget and Multi-Year Plan

3. the analytic unit

   the people who perform measurement and who examine the progress of current teaching methods in use, who evaluate classroom innovations before, during, and after their implementation, who examine the function of the system as a system, and who suggest changes in the program structure and function of the PPB framework.

Through the interaction of these three units, planning occurs, budgeting is achieved, and the system evolves towards a closer realization of system goals. This is PPB *without people-problems or Organizational Development.* (See Figure 1.)

The potential for system improvement through Organizational Development is outlined in the following propositions:

Proposition 1. OD entry methods can be used to insure an increased system commitment to innovative changes (in particular, the implementation of PPB).

Proposition 2. OD methods can be used to help the organization identify the objectives to which its members are really committed.

Proposition 3. The OD method can be used to effectively decentralize decision-making without destroying authority relationships by offering influence to subordinates in exchange for information (autonomy).

Proposition 4. OD methods can be used to change norms and build a climate of trust in the organization conducive to a better exchange of planning information.

Proposition 5. The OD method can be used to help the educational planner develop better rapport with those who work in the organization, and, in general, to facilitate the interface between the necessarily interacting components of the system.

Without dwelling on the methods involved, we now seek to describe a paradigm which will permit an effective unification of the methodologies of PPB and OD.

When a planning problem has been defined in an organization, both PPB and OD personnel should enter discussions with the group advocating the need. Although each consulting group should be familiar with the practices of the other before they have begun to work together, OD specialists will, at stages throughout the development of the project, advise PPB personnel in their work with people within the system. In particular, conflicts which are likely to emerge between the OD and PPB teams should be anticipated, confronted, and resolved at the earliest moment; a fluid interaction between these groups is most crucial to the success of the effort. At the initial stages, OD specialists will stress the participation of the advocating group in the study (their support is essential), but will also stress in the presence of that group the absolute necessity for involvement of all the groups involved. This is an important step in the so-called entry technology of OD (Proposition 1): clarify the approach to be used by the PPB-OD team, the special capabilities possessed by each part of the team, and the nature of the interaction to be sustained between the team and the client system. Even though the major work will be involved in the implementation of the PPB system, the entry phase is heavily dominated by OD technology in which the system is prepared for the implementation to follow, through appropriate methods of indoctrination and training. Focus here is concentrated on developing trust relationships, opening communications, and in general improving the organizational climate as set forth in Propositions 4 and 5.

The first step in the development of a functioning PPB system is to seek a definition of the goals of the organization. This, too, is OD dominated through the massive two-way goal setting techniques and other methodologies implied in Proposition 2. Traditionally, goal structures have been developed by moving down the existing administrative hierarchy to discover the goals of each level. Of course it is important to know what a program administrator considers to be the goals of his program, but it is also important to learn what his superiors consider to be the role and objectives of his program, and this is not often understood. The chief administrator of a subsuming program may control resources and policies which relate directly to the function of the smaller program. By involving more people, misunderstandings and conflicts can be brought to light and resolved. By OD goal setting, system goals will be more clearly and accurately defined, and, by their own investment, people will begin to adopt the system goals as their own. The actual organization of system goals into a rational structure is the area of special competence of PPB specialists, but during this phase there is interaction between the PPB team and system personnel which may be facilitated by OD people.

Throughout the initial phases of the PPB-OD coordination, OD specialists direct training sessions in which personnel improve communication skills, develop a better feeling for the goals of the PPB-OD effort as well as those of the system, and begin to feel the need for their cooperation and active participation.

Once the goal structure has been developed, PPB specialists then undertake to restructure and reorganize the system activities into more goal-oriented programs. This new structure can often mean significant changes in terms of departmental composition and function. During this phase, OD people plan the means by which these changes are to be instituted with a minimum of disruption and a maximum of acceptance. OD personnel, through their more specific awareness of behavioral peculiarities of the system, will likely advise the PPB personnel in the development of the program reorganization in anticipation of difficulties to be encountered. In particular, OD people will stress the importance of decentralizing decision-making (Proposition 3) for the sake of a freer flow of information and a greater sense of participation by system personnel, but also for the sake of better decisions.

Once the initial program structure has been developed and the system is ready to function under this new structure, PPB attempts to institute evaluation, budgeting, and planning cycles which are to serve the needs of the system indefinitely. Part of this task is the establishment and staffing of the auxiliary budgetary and analytic units. PPB defines the roles and tasks of the respective staffs, but OD provides important schooling in what should be the special nature of their interaction with system personnel. But system personnel should be more responsive to the needs of the auxiliary unit personnel, in any case, because of the OD methods which went before. Central unit personnel will feel less threatened by the specialists because they (the personnel) will be in greater control of the organization. Once this phase has been completed, the new PPB structure of activities is implemented with and largely by OD Personnel.

Focusing on the evaluation cycle, the following functions are seen to exist: definition of alternatives, measurement of performance indicators, criteria development, and evaluation of effectiveness. Alternatives can often be solicited from the personnel specifically responsible for instituting programs: teachers themselves are often sources for better teaching methods. By OD methods we have involved these people actively in the evaluation process. They supply ideas for alternatives and for methods of collecting confirming data; they supply data; they help in the development of the criteria for effectiveness, and they may assist in the evaluation itself. These studies are guided by members of the analytic unit, but because of the trust-fostering processes developed in the system, personnel are more willing to help. Here OD facilitates the system interactions in planning (Proposition) 5) through communications training sessions in which the

effective giving and receiving of feedback is taught; views on alternatives are solicited from within the system so that a broader base for the evaluation is established. In return for their information and ideas, personnel are involved in the decision process and gain the satisfaction of feeling that they are contributing to the growth of the system. In the budget phase, personnel may think of ways to save and to use creatively resources, and their thoughtful consideration of the nature of their evolving needs may yield more reliable programming of future system requirements. In the planning phase the future and evolution of the organizations is everyone's concern, and all are encouraged to contribute and to offer suggestions for change in their area of accountability. By the improved organizational climate promoted through OD, the more rational structure defined by PPB can hope to operate effectively and realize its potential as an evolving system. (See Figures 2 and 3 for representations of a possible working interaction of PPB and OD.)

The need for planning has been accepted quite universally by large and small organizations alike. However, planning usually has been a budget-oriented function performed by each department once during a budget cycle. Industrial organizations and, more recently, governmental agencies have begun to realize the need for a continuous, system-wide planning effort to organize the present and future in a way more closely reflecting the needs (or goals) of the entire system. *PPB provides a framework and basis for system change, stressing the central role of analysis in planning. Still, it is difficult and often dangerous to alter the basic function and structure of large organizations. Changes which are either incompletely or improperly instituted or which lack adequate support can even result in a decrease in productivity of effectiveness of system function. Innovations which fail can also serve to bias the chances against the acceptance of future changes which are good.*

Planning failures or inefficient system function can often be attributed to sabotage by personnel with vested interests in the status quo or to lack of cooperation by personnel who generally feel hostile to the needs of the organization. People-oriented methods are required specifically for improving the organizational climate and as entry media for important changes; and Organizational Development offers special expertise in this area. Through the development of a paradigm uniting a rationale for effective planning with a rationale for making planning effective, we see in the combination of the PPB and OD technologies a clear opportunity to improve the planning process.

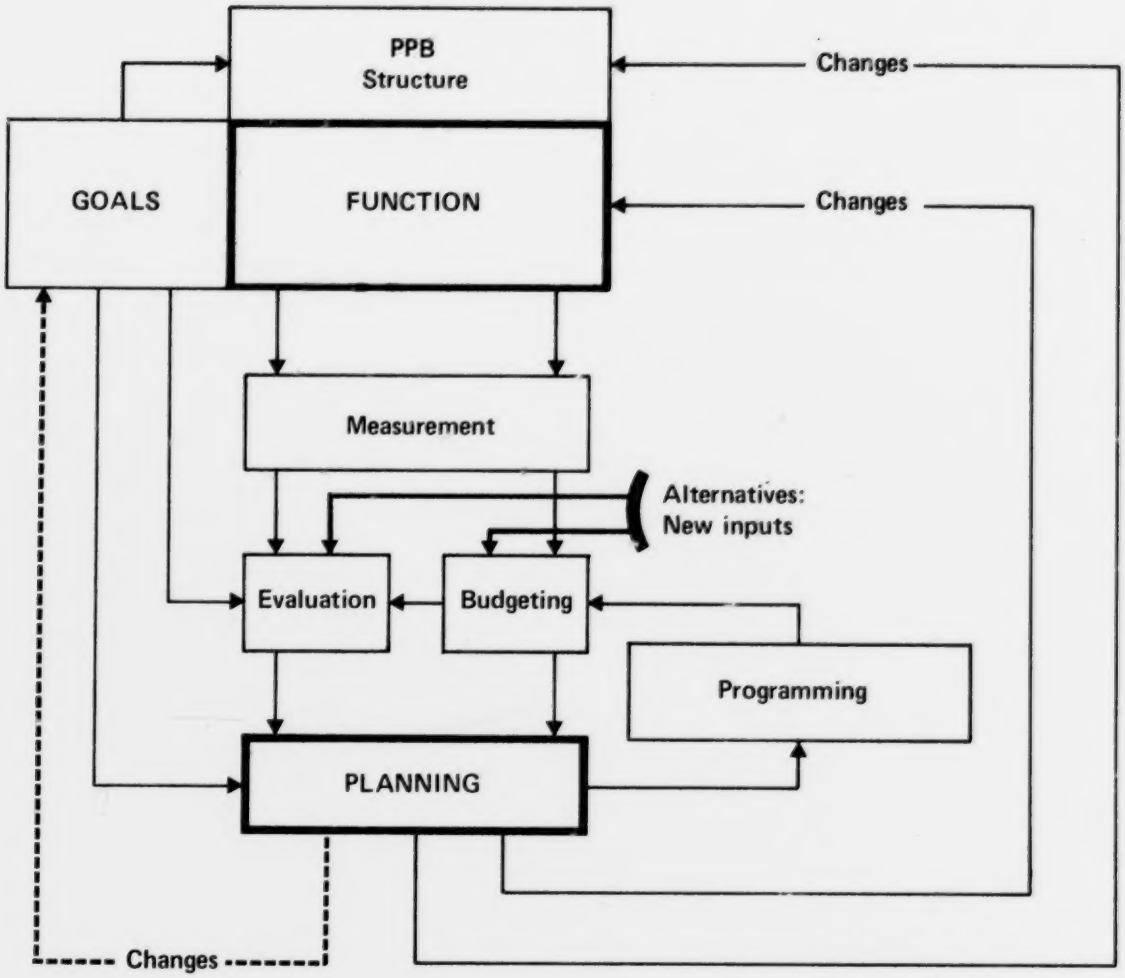

Figure 1. System Development Through PPB.

Figure 2. Paradigm for PPB-OD Coordinated Implementation of Management and Planning Functions.

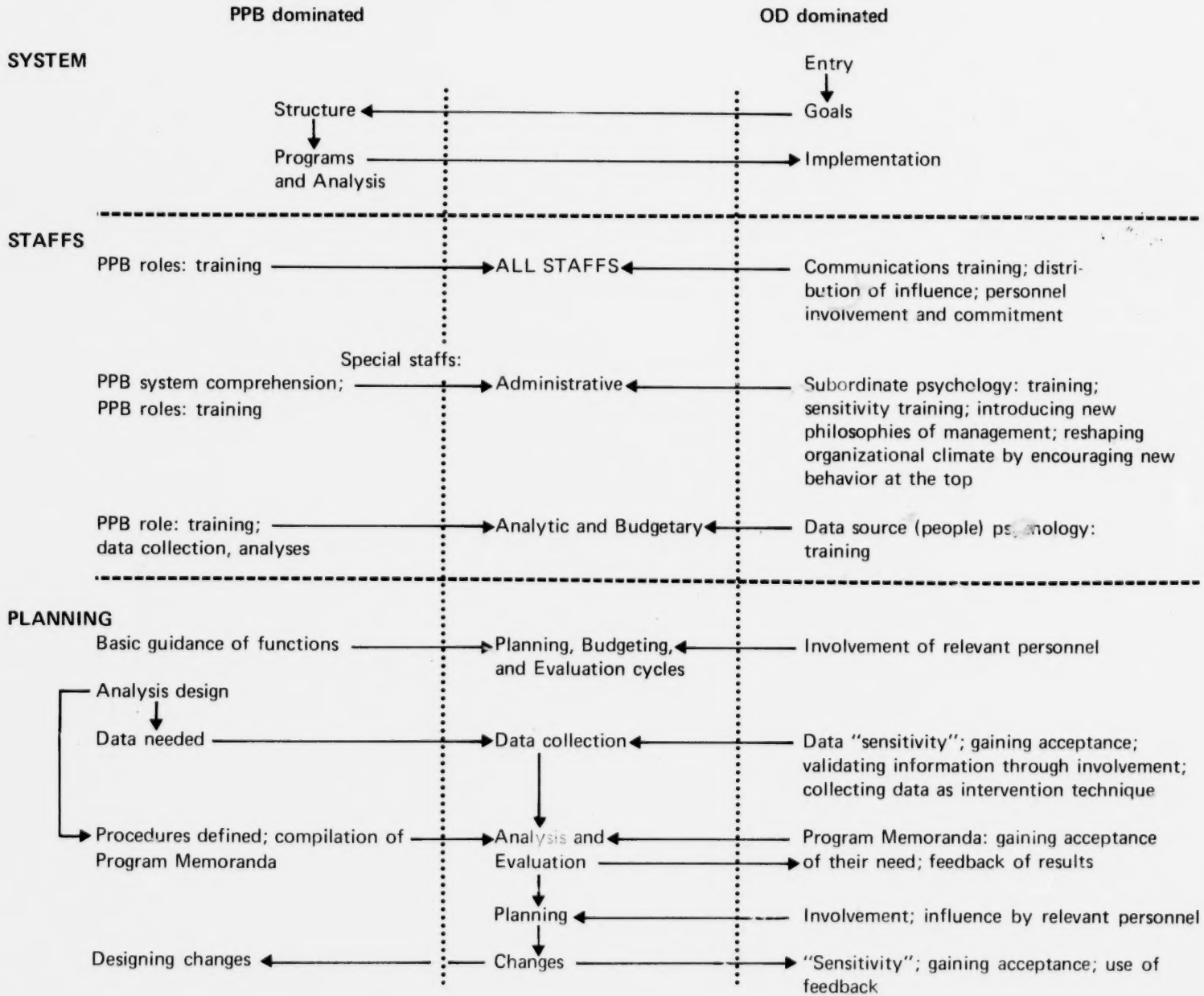

Figure 3. Paradigm for OD-Facilitated Implementation of PPB

PPB	OD
	1. Entry technology
	2. Goal collection
3. Goal structuring	
4. Analysis of current state of communications structures, interrelationships of system function, authority lines, and decision-making in the system	
	5. Communications training
	6. Improving organizational climate
7. Program structuring	
	8. Advising PPB team on the sensitivity of proposed changes; stressing decentralization of power by distributing influence according to the position of information
9. Design of roles of analytic and budgetary staffs, of the function of the PPB system, and of the nature and structure of needed communications	
	10. Training of administrative and auxiliary staffs in developing working relationships with functional unit personnel
	11. Implementing program structure: training staffs in their roles in the PPB system; diagnosing and devising means to resolve people-related implementation problems; enhancing involvement of personnel, gaining commitment
12. Design of budgetary, analytic, evaluative, and planning functions	
	13. Use of feedback; planning through group involvement
	14. Gaining acceptance of changes in goals, structure and function of system which are generated by planning; implementing changes

NOTES

1. For a more formal discussion of the role of analysis in PPB, see Donald M. Levine, "Structuring Program Analysis for Educational Research," (Santa Monica: RAND, P-4565, July, 1971).

2. "What is OD?" *News and Reports from the NTL Institute for Applied Behavioral Science,* 1968, 2, p. 1.

3. C. Brooklyn Derr, "Organizational Development and PPB for Education," in *A Symposium on Educational Planning and Program Budgeting: An Analysis of Implementation Strategy,* (Santa Monica: RAND, P-4675, October, 1971), pp. 32-49; C. Argyris, "Creating Effective Relationships in Organizations," *Human Organization,* 1958, *17* (1), pp. 34-40; R. Likert and R. Lippett, "The Utilization of Social Science," in L. Festinger and D. Katz (eds.), *Research Methods in the Behavioral Sciences,* (New York: Holt, 1953), pp. 581-643.

4. C. Brooklyn Derr, "Organization Development in One Large Urban School System," *Education and Urban Society,* 1970, 2(4), pp. 403-419;

   C. Brooklyn Derr, *An Organizational Analysis of the Boston School Department,* (Ed.D. thesis, School of Education, Harvard University, 1971).

5. Donald M. Levine, *The Utility of PPBS for Urban School Systems,* (Ed.D. thesis, School of Education, Harvard University, 1971), pp. 309-312.

6. Joel Smith, Francis M. Sim, and Robert C. Bealer, "Client Structure and the Research Process" in R.N. Adams and J.J. Preiss, *Human Organization Research* (Homewood, Illinois: Dorsey Press, 1960), p 51.

7. Price Waterhouse and Co., *Recommendations to Improve Management Effectiveness,* prepared for the Oakland Unified School System, September 23, 1970, p. 10. A similar document was prepared for the Portland schools in 1969.

8. Smith et al, p. 51.

9. Michel Crozier, *The Bureaucratic Phenomenon* (Chicago: University of Chicago Press, 1964), pp. 162-165.

10. Likert and Lippett, p. 603.

11. Harry J. Hartley, *Educational Planning-Programming-Budgeting: A Systems Approach,* (Englewood Cliffs: Prentice-Hall, 1968), pp. 245-246.

12. Argyris, *op. cit.*

13. Donald M. Levine, "Achieving Balanced Implementation of Program Budgeting for Education" in *A Symposium on Educational Planning and Program Budgeting: An Analysis of Implementation Strategy* (Santa Monica: RAND, P-4675, October, 1971), pp. 50-58.

14. Likert and Lippett, p. 613.

15. Anthony Jay, *Management and Machiavelli* (New York: Holt, Reinhart, Winston, 1967), p. 38.

16. Herbett A. Shepard, "Innovation-Resisting and Innovation-Producting Organizations" in Warren G. Bennis, Kenneth D. Benne, Robert Chin (eds.) *The Planning of Change* (New York: Holt, Reinhart, Winston, 1969), p. 520.

17. Anthony Downs, *Inside Bureaucracy* (Boston: Little, Brown And Co., 1967), p. 147.

18. Morris Janowitz, *Institution Building in Urgan Education* (New YORK: Russell Sage Foundation, 1969); Derr, *An Organizational Analysis of the Boston School Department;* and *Levine,* The Utility of PPBS for Urban School Systems.

19. E. S. Quade, "Systems Analysis Techniques for Planning-Programming-Budgeting" (Santa Monica: RAND, P-3322, March, 1966), p.26.

20. Aaron Wildavsky, "Rescuing Policy Analysis from PPB," in *The Analysis and Evaluation of Public Expenditures: The PPB System* (Washington: U.S. Government Printing Office, 1969), vol. 3, p. 840.

21. Crozier, *op. cit.*

22. Derr, *An Organizational Analysis of the Boston School Department.*

23. Wildavsky, p. 843.

24. Allen Schick, "Systems for Analysis: PPB and Its Alternatives," in *The Analysis and Evaluation of Public Expenditures: The PPB System* (Washington: U.S. Government Printing Office, 1969), vol. 3, pp. 820-821.

25. Likert and Lippett, p. 603.

26. John C. Croft, "Organization Development and the Planning Interface," (working paper produced at The Ontario Institute for Studies in Education, University of Toronto, Toronto, Canada, 1971).

27. Ibid., p. 27.

28. Levine, *The Utility of PPBS for Urban School Systems,* pp. 288-312, 323-324, 359-373.

29. Leonard R. Sayles and George Strauss, *Human Behavior in Organizations* (Englewood Cliffs: Prentice-Hall, 1966), pp. 381-385.

30. Graham Allison, *Essence of Decision* (Ph.D. thesis, Kennedy School of Government, Harvard University, 1968), p. 187.

31. Richard A. Schmuck and Matthew B. Miles (eds.), *Organizational Development in Schools* (Palo Alto: National Press Books, 1972), pp. 8-9; and John J. Sherwood, "An Introduction to Organization Development," *Experimental Publication System,* 1971,11, Ms. No. 396-1.

32. Likert and Lippett, p. 611.

33. *Idem.*

34. Francis G. Caro, "Issues in the Evaluation of Social Programs," *Review of Educational Research,* 1971, 41 (2), p. 93.

35. I. Galnoor and B. M. Gross, "The New System Budgeting and the Developing Nations," *International Social Science Journal,* 1969, 21 (1), p. 43.

36. See "Discussion" in *A Symposium on Educational Planning and Program Budgeting: An Analysis of Implementation Strategy* (Santa Monica: RAND, P-4675, October, 1971), pp. 72-73; and, for example, the Minutes of the Meetings of the Advisory Commission on School District Budgeting and Accounting, Department of Education, State of California, January 21, 1972 and dates prior to this.

37. Schick, p. 823.

38. *Idem.*

39. "Statement by the President to the members of the Cabinet and Heads of Agencies" (Washington: Office of the White House Press Secretary, August 25, 1965, mimeo.), emphasis added, as quoted in Edwin L. Harper, Fred A. Kramer, and Andrew M. Rouse, "Implementation and Use of PPB in Sixteen Federal Agencies," *Public Administration Review,* 1969, 29 (6), p. 628.

40. Harper et al, p. 627.

41. *Ibid.,* p. 630.

42. *ibid.,* p. 623

43. Allen Schick, "Systems Politics and Systems Budgeting," in *Public Administration Review,* 1969, 29 (2), pp. 137-151.

44. Wildavsky, pp. 838-840.

45. Hartley, p. 232.

46. Selma Mushkin, "PPB in Cities," *Public Administration Review,* 1969,29 (2), pp. 170-173.

47. See Levine, all works cited; and S. A. Haggart, S. M. Barro, M. B. Carpenter, J. A. Dei Rossi, and M. L. Rapp, *Program Budgeting for School District Planning: Concepts and Applications* (Santa Monica: RAND, RM-6116-RC, 1969).

48. Schick, p. 820